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IS 8498 (1977): Temephos Emulsifiable Concentrates [FAD 1: Pesticides and Pesticides Residue Analysis]



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“Knowledge is such a treasure which cannot be stolen”

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IS : 8498 - 1977

(Reaffirmed 2002)

Indian Standard
**SPECIFICATION FOR
TEMEPHOS EMULSIFIABLE CONCENTRATES**

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**INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

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Indian Standard

SPECIFICATION FOR TEMEPHOS EMULSIFIABLE CONCENTRATES

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AMENDMENT NO. 1 APRIL 1982

TO

IS:8498-1977 SPECIFICATION FOR TEMEPHOS
EMULSIFIABLE CONCENTRATES

Alteration

[Page 5, clause 3.2(a)] - Substitute the following
for the existing matter:

'a) Name of the material and its end use,'

(AFCDG 6)

Reprography Unit, ISI, New Delhi, India

AMENDMENT NO. 2 JULY 1988
TO
IS : 8498 - 1977 SPECIFICATION FOR TEMEPHOS
EMULSIFIABLE CONCENTRATES

(*Page 4, clause 2.2.5*) — Add the following note at the end of the clause:

' NOTE — The material need not be subjected to heat treatment if it has crossed half of its shelf life as ascertained from the date of manufacture and date of expiry declared on the container. '

(AFCDG 6)

Printed at New India Printing Press, Khurja, India

AMENDMENT NO. 3 MAY 1994
TO
IS 8498 : 1977 SPECIFICATION FOR TEMEPHOS EC

(Page 4, clause 2.2.5) — Delete.

(Page 6, clause 4.1) — Substitute the following for the existing:

'When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 2.3.1 of the standard.'

(FAD 1)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 4 NOVEMBER 1997
TO
IS 8498 : 1977 SPECIFICATION FOR TEMEPHOS
EMULSIFIABLE CONCENTRATES

(Page 4, clause 2.1.1) — Substitute the following for the existing clause:

“2.1.1 Temephos, technical employed in the manufacture of emulsifiable concentrates shall conform to IS 8701 : 1996 ‘Specification for temephos, technical (first revision)’.”

(Page 4, clause 2.2.1) — Substitute the following for the existing clause:

‘2.2.1 Description — The material shall be homogeneous and stable liquid. Sediments and/or suspended matter shall be negligible. On dilution with water, it shall readily form emulsion suitable for spray.’

(Page 4, clause 2.2.2, line 3) — Substitute ‘IS 6940 : 1982’ for ‘IS : 6940 - 1973’.

(Page 4, clause 2.2.3) — Substitute ‘IS 1448 [P : 20] : 1982†’ for ‘IS : 1448 [P : 20] - 1960†’.

(Page 4, clause 2.2.4, last line) — Substitute ‘IS 6940 : 1982’ for ‘IS 6940 : 1973’.

(Page 4, clause 2.2.5, line 2) — Substitute ‘IS 6940 : 1982’ for ‘IS : 6940 - 1973’.

(Page 4, footnote marked ‘*’) — Insert ‘(first revision)’ at the end of the text.

(Page 4, footnote marked ‘†’) — Insert ‘(first revision)’ at the end of the text.

(Page 5, clause 2.3.2, line 2) — Substitute ‘IS 6940 : 1982’ for ‘IS : 6940 - 1973’.

(Page 5, clause 3.1) — Substitute ‘IS 8190 (Part 2) : 1988†’ for ‘IS : 8190 (Part II) - 1976†’.

(Page 5, footnote marked ‘*’) — Insert ‘(first revision)’ at the end of text.

(Page 5, footnote marked ‘†’) — Insert ‘(second revision)’ at the end of text.

Amend No. 4 to IS 8498 : 1977

(Page 6, clause 4.1) — Substitute the following for the existing matter:

“4.1 When bulk manufactured material is offered for inspection representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 ‘Methods for sampling of pesticide formulation’ within 90 days of its manufacture. The criteria for conformity shall be as given in IS 10627:1983. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627:1983. However, the criteria for conformity of the material shall be the limits of tolerances given under 2.3.1 of the standard.”

(Page 6, clause 5.2)— Substitute ‘IS 1070 : 1992*’ for ‘IS : 1070 - 1977’.

(Page 6, footnote marked “*”) — Substitute ‘Reagent grade water (third revision)’ for the existing title.

(FAD 1)

Indian Standard

SPECIFICATION FOR

TEMEPHOS EMULSIFIABLE CONCENTRATES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 June 1977, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 Temephos is used in public health programme. It is also used for controlling insects pests of agricultural importance.

0.3 Temephos emulsifiable concentrate is generally manufactured to contain 50 percent (*m/m*) of temephos.

0.4 In the preparation of this standard, due consideration has been given to the provisions of the Insecticides Act, 1968, and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and test for temephos emulsifiable concentrates.

2. REQUIREMENTS

2.1 Constituents — The material shall consist of temephos, technical dissolved in suitable solvent(s), together with emulsifying agent(s), and with or without stabilizer(s).

*Rules for rounding off numerical values (*revised*).

2.1.1 Temephos, technical employed in the manufacture of emulsifiable concentrates shall conform to 'Indian Standard specification for temephos, technical' (under preparation).

2.2 Physical — The material shall comply with physical requirements specified in 2.2.1 to 2.2.5.

2.2.1 Description — The material shall be a stable liquid and shall be free from suspended matter and sediment.

2.2.2 Cold Test — To turbidity or separation of solid and/or oily matter shall occur when the material is subjected to the cold test at 0°C as prescribed in 13.1 of IS : 6940-1973*, or at any other lower temperature as agreed to between the purchaser and the supplier. Introduction of seeding crystal is not necessary for the test.

2.2.3 Flash Point (Abel) — When determined by the method prescribed in IS : 1448 [P : 20]-1960† the flash point of the material shall be above 24.5°C.

2.2.4 Emulsion Stability — Any separation, including creaming at the top and sedimentation at the bottom, of 100 ml of emulsion prepared in standard hard water with 5 ml of the concentrate for public health use and with 2 ml of concentrate for agricultural use, shall not exceed 2 ml when tested by one of the methods prescribed in 13.3 of IS : 6940-1973*.

2.2.5 Heat Stability — After treating in accordance with the method prescribed in 13.4 of IS : 6940-1973* the material shall comply with the requirements specified in 2.2.1 to 2.2.4 and 2.3.1.

2.3 Chemical — The material shall comply with the chemical requirements specified in 2.3.1 and 2.3.2.

2.3.1 Temephos Content — When determined by the method prescribed in Appendix A of 'Indian Standard specification for temephos, technical' (under preparation), the observed temephos content, percent (m/m), of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits indicated below:

Nominal Values percent	Tolerance percent	
Up to 9	+ 10 - 5	} of the nominal value
10 and below 50	± 5	
50 and above	+ 5 - 3	

*Methods of tests for pesticides and their formulations.

†Methods of test for petroleum and its products, [P : 20] Flash point by Abel apparatus.

2.3.1.1 The actual value of temephos content in the formulation shall be calculated to the second decimal place for rounding off to the first decimal place before applying the tolerances given in 2.3.1.

2.3.2 Acidity — When tested by the method prescribed in 13.5 of IS : 6940-1973*, acidity (as H_2SO_4) shall be not more than 0.5 percent by mass.

3. PACKING AND MARKING

3.1 Packing — The material shall be packed in clean and dry containers made of mild steel or tin plate or aluminium. Mild steel or tin plate containers shall be suitably and properly lacquered from inside. The containers shall also comply to the general requirements stipulated in 2 of IS : 8190 (Part II)-1976†.

3.2 Marking — The containers shall bear legibly and indelibly the following information and any other information as is necessary under the Insecticides Act and Rules:

- a) Name of the material,
- b) Name of the manufacturer,
- c) Batch number,
- d) Date of manufacture,
- e) Net volume of contents,
- f) Nominal temephos content percent (m/m), and
- g) The minimum cautionary notice worded as in the Insecticides Act and Rules.

3.2.1 Each container may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Methods of tests for pesticides and their formulations.

†Requirements for packing of pesticides: Part II Liquid pesticides.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in 'Indian Standard Methods for sampling of pesticides and their formulations' (under preparation).

NOTE — Till such time the standard under preparation is published, the matter shall be as agreed to between the concerned parties.

5. TESTS

5.1 Tests shall be carried out by the appropriate methods referred to in 2.2.2 to 2.2.5, 2.3.1 and 2.3.2.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977*) shall be employed in tests.

NOTE — ' Pure chemicals ' shall mean chemicals that do not contain impurities which effect the results of analysis.

*Specification for water for general laboratory use (*second revision*).

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